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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,840	10/25/2001	Carmine J. Vetrano	SAET-001CP2 61966-017	6495

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EXAMINER
JEFFERY, JOHN A

ART UNIT	PAPER NUMBER
3742	

DATE MAILED: 03/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/053,840	VETRANO, CARMINE J.	
	Examiner	Art Unit	
	John A. Jeffery	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 21-26* is/are rejected.

7)☒ Claim(s) *19 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4, 6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

Claims 13 and 14 are objected to because of the following informalities:

Claim 13: In line 1, no antecedent basis exists for "said cylindrical body." The test for definiteness under 35 U.S.C. § 112, second paragraph is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986). Here, one of ordinary skill in the art would understand from the specification what "said cylindrical body" refers to; therefore the claim is not indefinite. However, Applicant must make the change for clarity.

Claim 14: In the last line, the space prior to the period must be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 9, 12-14, 21, and 23 are rejected under 35 USC 102(b) as being anticipated by Weiss et al (US3156028). Weiss et al (US3156028) discloses an air

heater comprising a "heater core" (inner tube) with electrical heating coil, a "heat chamber" 21 within the heater core, an "air conduit" 13a surrounding an outer surface of the heater core and communicating with the "heat chamber" such that injection of air does not contact the heating coils. See Figs. 1 and 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 2, 3, 17, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al (US3156028) in view of Miller (US6244323). The claims differ from the previously cited prior art in calling for the temperature to be sufficient to remove an outer coating of an optical fiber. Electrically heating and directing heated gas flow to remove fiber coatings is well known as evidenced by Miller (US6244323) noting col. 5, lines 1-40 where a stream of hot gas at 820° C is directed to an optical fiber to remove its coating. According to col. 6, lines 9-21, even lower gas temperatures (e.g., down to 550° C) are effective to remove fiber coatings. In view of Miller (US6244323), it would have been obvious to one of ordinary skill in the art to provide a

heated gas temperature within the claimed range in order to heat the gas to effectively remove the coating from an optical fiber. While the heater of Weiss et al (US3156028) is not used for heating optical fibers, such a limitation merely recites the intended use of the apparatus structure and does not form part of the structure per se. It is well settled that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Also, a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitations of the apparatus claimed. See *Ex parte Masham*, 2 USPQ 2d 1647 (1987). Here, the Weiss et al (US3156028) heater is capable of heating a variety of workpieces--including optical fibers. In order to remove fiber coatings, one of ordinary skill in the art would be motivated to heat the gas to the claimed temperature range in light of the teachings of Miller (US6244323). Regarding claim 17, it is well settled that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233,235 (CCPA 1955). Here, the selection of the given dimensions of length and width are tantamount

to routine optimization well within the level of one of ordinary skill in the art given a desired convective heating effect.

Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al (US3156028) in view of Fortune (US5483040). The claims differ from the previously cited prior art in calling for the time required to heat the injected air to not exceed 30 seconds. However, heating a gas with an electric heater in the shortest possible time prior to convectively heating a workpiece is conventional and well known in the art as evidenced by Fortune (US5483040) noting col. 1, lines 30-38. Fortune (US5483040) states that the gas "may be heated instantly as it flows across, in heat exchange relation, [to] the heat source and is instantly applied to the work point." (emphasis added.) The express teaching of "instantly" heating the gas to operating temperature (1500° C--col. 1, line 65) suggests an extremely short heating time. Although not expressly stated, such an "instant" time would reasonably suggest to one of ordinary skill in the art a time less than 30 seconds. In view of the desirability of instantly heating the gas to 1500° C in Fortune (US5483040), it would have been obvious to one of ordinary skill in the art to heat the gas to operating temperature in the previously described apparatus so that the operating temperature was very quickly obtained thereby improving efficiency and minimizing thermal inertia. The claims also differ from the previously cited prior art in calling for a temperature controller. However, controlling an electric heater to maintain a predetermined temperature is known in the art as shown by Fortune (US5483040) in col. 3, lines 35-50. In view of Fortune

(US5483040), it would have been obvious to one of ordinary skill in the art to provide a temperature controller in the previously described apparatus so that the temperature were automatically maintained thereby precluding the need to manually monitor the temperature and manually control the heater accordingly.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al (US3156028) in view of IT431255. The claims differ from the previously cited prior art in calling for a spiral air conduit. Providing a spiral fluid conduit concentrically surrounding an electrical heating element and inner heat chamber is conventional and well known in the art as evidenced by IT431255 noting spiral conduit 8a in Figs. 1 and 2. By spiraling the outer conduit, the fluid in the conduit is forced to take a longer fluid flow path and therefore is in heat transfer relation with the electric heater longer as compared to a straight flow path. In view of IT431255, it would have been obvious to one of ordinary skill in the art to provide a spiral flow conduit in the previously described apparatus so that fluid in the conduit is forced to take a longer fluid flow path and therefore is in heat transfer relation with the electric heater longer as compared to a straight flow path.

Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al (US3156028) in view of Miller (US6244323) and further in view of Gammelin (US5196667). The claims differ from the previously cited prior art in calling for controllably releasing the fluid (air) during relatively short periods of time. Providing a

pulsed flow from a compressed gas source in an electric gas heating application is conventional and well known in the art as evidenced by Gammelin (US5196667) noting col. 2, lines 54-56 where compressed air is pulsed to ensure "a particularly precisely defined heat action." In view of the well known advantages of pulsing compressed air in a convective heating application, it would have been obvious to one of ordinary skill in the art to provide pulsed airflow in the previously described apparatus so that turbulence is created by pulsing the airflow thereby enhancing the convective heating effect.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al (US3156028) in view of Remseth et al (US1949658). The claim differs from the previously cited prior art in calling for the heater core to be replaceable. Providing replaceable heater cores in electric air heaters is conventional and well known in the art as evidenced by Remseth et al (US1949658) noting "heater core" 26, 27, 26a which is attached by means of screws and threaded connections to other structures as well as being spaced to enable removal. See Fig. 1. In view of Remseth et al (US1949658), it would have been obvious to one of ordinary skill in the art to provide a replaceable heater core in the previously described apparatus so that the heater core could be readily removed from the housing for repair or replacement.

Claims 5 and 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al (US3156028) in view of IT431255 and further in view of Remseth et al (US1949658). The claim differs from the previously cited prior art in calling for the

heater core to be replaceable by being spaced from the helical coil. Providing replaceable heater cores in electric air heaters is conventional and well known in the art as evidenced by Remseth et al (US1949658) noting "heater core" 26, 27, 26a which is attached by means of screws and threaded connections to other structures as well as being spaced to enable removal. See Fig. 1. Note spacer 27a spacing the heater core from the outer sinuous conduit. In view of Remseth et al (US1949658), it would have been obvious to one of ordinary skill in the art to provide a replaceable heater core in the previously described apparatus so that the heater core could be readily removed from the housing for repair or replacement. With regard to claim 5, in view of the secure, sealed connection of the conduit 29 and heat chamber 26 as best shown in Fig. 1 of Remseth et al (US1949658), no criticality is seen in the provision that such connection be welded as opposed to a removable connection of Remseth et al (US1949658).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al (US3156028) in view of SU1009405. The claim differs from the previously cited prior art in calling for quartz material. Forming both the heater core and the heat chamber of an electrically heated fluid heater of quartz is conventional and well known in the art as evidenced by SU1009405 noting the figure where the "heat chamber" 3 and the outer conduit 2 are formed of quartz so that radiant energy from electric heater 4 is not unduly absorbed by the structures due to their transparency and radiant energy thus passes unimpeded to the fluid within the structures. In view of SU1009405, it would have been

obvious to one of ordinary skill in the art to form the claimed structures from quartz in the previously described apparatus so that radiant energy from electric heater 4 is not unduly absorbed by the structures due to their transparency and radiant energy thus passes unimpeded to the fluid within the structures.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al (US3156028) in view of Sikka et al (US6437292). The claim differs from the previously cited prior art in calling for a 5000-hour heater life. The use of electric heaters with such life spans is conventional and well known in the art as evidenced by Sikka et al (US6437292) noting col. 6, lines 19-27 where an electric heating element is disclosed as having a 5000-20000 hour life depending on operating power. In view of Sikka et al (US6437292), it would have been obvious to one of ordinary skill in the art to provide an element with a 5000 hour life in the previously described apparatus so that the element did not require frequent replacement thus saving maintenance costs.

Double Patenting

The non-statutory double patenting rejection, whether of the obvious-type or non-obvious-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F2d 438, 164 USPQ 619 (CCPA 1970); *In re Van*

Ornam, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi,* 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman,* 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78 (d).

Effective January 1, 1994, a registered attorney or agent of record may sign a Terminal Disclaimer. A Terminal Disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3, 11, and 21-26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 6,402,856. While the claims of the instant application are not identical to the claims of the '856 patent, they are not patentably distinct from each other in that the claims of the instant application are merely broader in scope than the claims of the '856 patent. It is well settled that a second application containing a broader claim, more generical in its character than the specific claim in the prior patent, typically cannot support an independent valid patent. *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993). Furthermore, there is no apparent reason why the instant claims could not have been prosecuted in the application which matured into the '856 patent.

Allowable Subject Matter

Claims 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The art should be both separately considered and considered in conjunction with the previously cited prior art when responding to this action. JP 106 discloses removing fiber optic coatings with hot air. US 410, US 014, US 626, US 740 disclose fluid heaters relevant to the instant invention.

Conclusion

Any inquiry concerning this or earlier communications from the examiner should be directed to John A. Jeffery at telephone number (703) 306-4601 or fax (703) 305-3463. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM EST. The examiner can also be reached on alternate Fridays.

The fax phone numbers for the organization where this application or proceeding is assigned are:

Before Final	(703) 872-9302
After Final	(703) 872-9303
Customer Service	(703) 872-9301

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0861.

JOHN A. JEFFERY
PRIMARY EXAMINER

3/19/03